

## **CMNet PRODUCTION ENVIRONMENT FOR 2017**

CMNet is about to enter year four of operation. The system continues to function as robustly as in previous years with only minor issues with equipment failures. The only major outage of the year was on February when the Hydro shut off power for the day to replace hydro poles damaged by rot and Woodpeckers. There have been a few issues with the management accounting and reporting systems but these now appear to have been resolved.

The system currently has 1 x Fibre line coming from Plockton and 1 x Fibre line coming from Lochcarron. The line from Plockton is almost running at capacity and speeds are holding up well. The line from Lochcarron is not functioning as well as expected and Zen have been informed.

There have been a number of AirRouters randomly rebooting but updates to the software have largely solved this problem although one AirRouter in Braeintra continues to cause problems and may have to be changed. Only three items of equipment failed during the year, one external receiver and two internal routers.

Intermittent loss of signal to the Glen was eventually traced to a mismatch of chips in the dishes in the Glen and on the hill, one of the dishes was changed and the problem resolved.

A deliberate attack on the link between CMhigh and Lochcarron in February caused performance problems for customers connected to this link and they had to be rerouted. The attack lasted for several days but the security of the system held up and access was denied to this illegal and malicious attack. The Cyber Crime Unit of Police Scotland in Edinburgh were informed. The fact that we survived this attack and were able to reroute customers is evidence of the strong design and security of the system.

The data capacity of the system now constantly exceeds the 1Tera Byte threshold. At a cost of only £1.50 for 20Gb and a standing charge of £5 starting in December, we must be the cheapest of all community systems.

The table below shows monthly usage and the daily averages. It can be quite clearly seen that the system is now being more heavily used as people have become to realise that they can now do so much more than they could when using BT.

	Monthly Usage (GB)	Daily Average (GB)
September 2016	441 (estimated)	14.7
October 2016	517	16.7
November 2016	571	19.1
December 2016	574	18.4
January 2017	808.8	26
February	732.8	25.8
March	790.8	25.5
April	879	29.3
May	906	29.2
June	1036	34.5
July	1078	34.8
August	1078	34.8
September	1160	38.6
October	1108	35.7

We currently have 35 subscribers on one line from the Plockton exchange and currently no customers are connected to the line from Lochcarron.

We have another 33 customers waiting to be connected. A significant amount of work will be required to set up relays and carry out installations to achieve this.

Joe Grimson.